Construction on the Information Highway

Edited by:
Ž. Turk
University of Ljubljana, Slovenia
Appendices:

Appendix I: About paper authors and workshop participants .................................................. 525
Appendix II: Construction resources on the Internet ............................................................ 539
Appendix III: CIB information ............................................................................................... 555
# Table of contents:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>7</td>
</tr>
<tr>
<td>Workshop organization</td>
<td>9</td>
</tr>
<tr>
<td><strong>Opening session:</strong></td>
<td></td>
</tr>
<tr>
<td>Bakens, W.</td>
<td></td>
</tr>
<tr>
<td>CIB in a period of transition</td>
<td>11</td>
</tr>
<tr>
<td>Fenves, S.J.</td>
<td></td>
</tr>
<tr>
<td>Information technologies in construction: a personal journey</td>
<td>13</td>
</tr>
<tr>
<td><strong>Workshop papers:</strong></td>
<td></td>
</tr>
<tr>
<td>Allweyer, T., Babin-Ebell, T., Leinenbach, S. and Scheer, A.-W.</td>
<td></td>
</tr>
<tr>
<td>Model-based re-engineering in the European construction industry</td>
<td>21</td>
</tr>
<tr>
<td>Amor, R. and Clift, M.</td>
<td></td>
</tr>
<tr>
<td>Document models and concurrent engineering</td>
<td>33</td>
</tr>
<tr>
<td>Amor, R., Bloomfield, D., Langham, M., Fortmann, J., Jarrett, N. and Goodwin, P.</td>
<td></td>
</tr>
<tr>
<td>The UK industry knowledge base feasibility study</td>
<td>35</td>
</tr>
<tr>
<td>Andersson, N. and Johansson, P.</td>
<td></td>
</tr>
<tr>
<td>Re-engineering of the project planning process</td>
<td>45</td>
</tr>
<tr>
<td>Arnold, J.A. and Teicholz, P.</td>
<td></td>
</tr>
<tr>
<td>The use of knowledge based components for automated task support in the process industry</td>
<td>55</td>
</tr>
<tr>
<td>Barlow, R.P.G. and Amirudin, R.</td>
<td></td>
</tr>
<tr>
<td>Structural steelwork planning and design evaluation - a knowledge based approach</td>
<td>69</td>
</tr>
<tr>
<td>Björk, B.-C., Löwnertz, K. and Kiviniemi, A.</td>
<td></td>
</tr>
<tr>
<td>ISO 13567 - the proposed international standard for structuring layers in computer aided building design</td>
<td>77</td>
</tr>
</tbody>
</table>
Bouchlaghem, N.M. and Liyanage, I.G.
Virtual reality applications in the UK's construction industry ........................................... 89

Brown, A., Cooper, G., Rezgui, Y., Brandon, P. and Kirkham, J.
The architecture and implementation of the a distributed computer integrated environment .................................................................................................................................................................................. 95

Chen, Y.Z. and Mayer, T.W.
Supporting interaction within virtual studios ........................................................................ 109

Christiansson, P.
Knowledge communication in the building industry - the knowledge node concept .................................................................................................................................................................................. 121

Crook, D., Rooke, J. and Seymour, D.
Research techniques in construction information technology .............................................. 133

Duhovnik, J. and Dolinšek, B.
Computer modeling of robotic assembling of reinforcement .............................................. 145

Dutton, D. M., Amor, R. W. and Bloomfield, D. P.
Knowledge-based systems and the Internet: a future perspective ........................................ 153

Ekholm, A. and Fridqvist, S.
Modelling of user organisations, buildings and spaces for the design process .................. 165

Faraj, I. and Alshawi, M.
A modularized approach to the integrated environment ...................................................... 179

Fridqvist, S. and Ekholm, A.
Basic object structure for computer aided modeling in building design ............................ 197

Futcher, K. and Rowlinson, S.
A new model for the management of portfolios of projects ................................................... 207

Garrett, Jr., J. H., Fenves, S. J. and Stasiak, D.
A WWW-based regulation broker ............................................................................................. 219

Integrating applications for the construction industry using a STEP-based integration platform (SIP) .................................................................................................................................................................................. 231

Grilo, A., Betts, M. and Mateus, M.
Electronic interaction in construction: why is not a reality? ................................................ 241

Guss, C.
Virtual teams, project management processes and the construction industry ...................... 253

Hannus, M., Heikkonen, A. and Laitinen, J.
Internet in construction projects and research ...................................................................... 265

Hauser, M., Nollau, C. and Scherer, R.J.
Intelligent design tools as product model interfaces ................................................................ 273

Ikeda, M., Sekihara, Y. and Itoh, N.
Construction planning system for high-rise buildings using an object-based model .......................... 283
Jamieson, M. and Thorpe, A.
Reframing collaboration technologies in the construction value chain

Jones, K.G.
The use of an evaluation matrix to inform the IT strategic planning process for maintenance management

Kangari, R. and Sadri, S.
Building construction primary task models

Katranuschkov, P. and Scherer, R.J.
Schema mapping and object matching: a STEP-based approach to engineering data management in open integrated environments

Kong, C.W., Ling T.S. and Ng, E.
On-line documentation of proven architectural facade and detailing in the tropics

Line, L. and Syvertsen, T.G.
Virtual engineering teams: strategy and implementation

Mateus, M., Watson, I., Aouad, G. and Grilo, A.
An interpretative methodology for information systems strategy development in project management

Molkenthin, F.
Integration of construction, calculation and documentation - "the structural editor"

Nollau, C., Hauser, M. and Scherer, R.J.
Information retrieval - a concept of an engineering database server for prefabricated elements

O'Brien, M.
Production and evaluation of a multi-media product selector

Peña-Mora F. and Soibelman L.
A geographically distributed multi-reasoning mechanism for change negotiation management of large scale engineering systems

Rebolj, D. and Tibaut A.
Integrated information system supporting road design, evaluation and construction

Rivard, K., Gomez N. and Fenves, S.J.
An information model for the preliminary design of buildings

Rode, C. and Grau, K.
Pragmatic implementation of an integrated building design system

Shen, Q.
The impact of construct IT and the management of organizational change

Smith, I.
Augmenting design integration and communication using idiom